



# **EQC PRESENTATION: Electricity Markets In The Pacific Northwest**

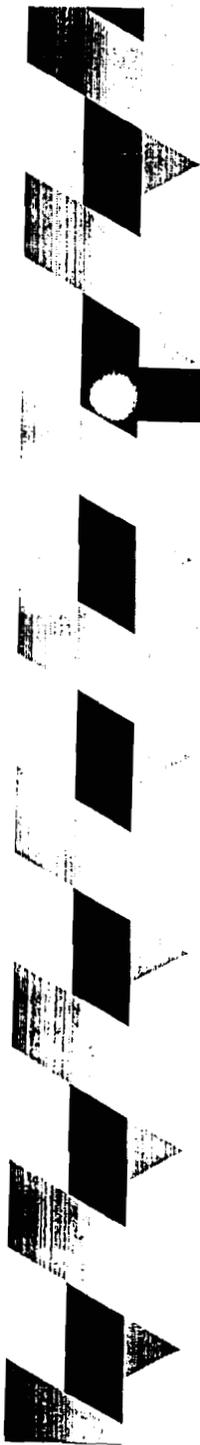
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**Dec. 10, 2001**

**By**

**John Hines**

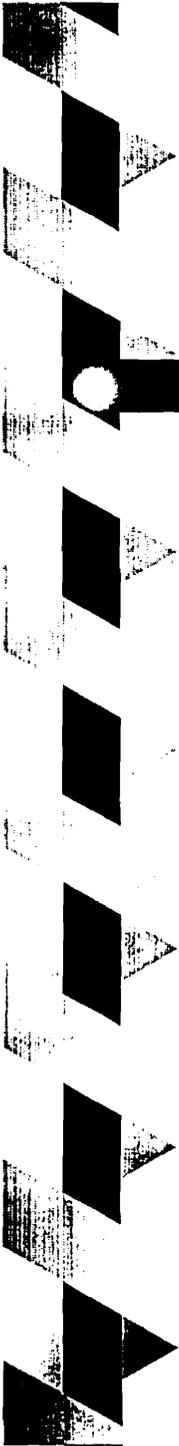
**Northwest Power Planning Council**



# OUTLINE

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- **Supply and Reliability in Pacific Northwest**
  - **Council's March Analysis vs. Nov. Analysis**
- **Supply & Reliability Trends**
- **Supply/Demand Situation in Montana**
  - **Amount of Generation**
  - **Amount of Load**
- **Implications for Montana**
  - **Default Supply Portfolio**
    - **Policy Decisions Need To Be Made**



# **NWPPC Power/Reliability Outlook**

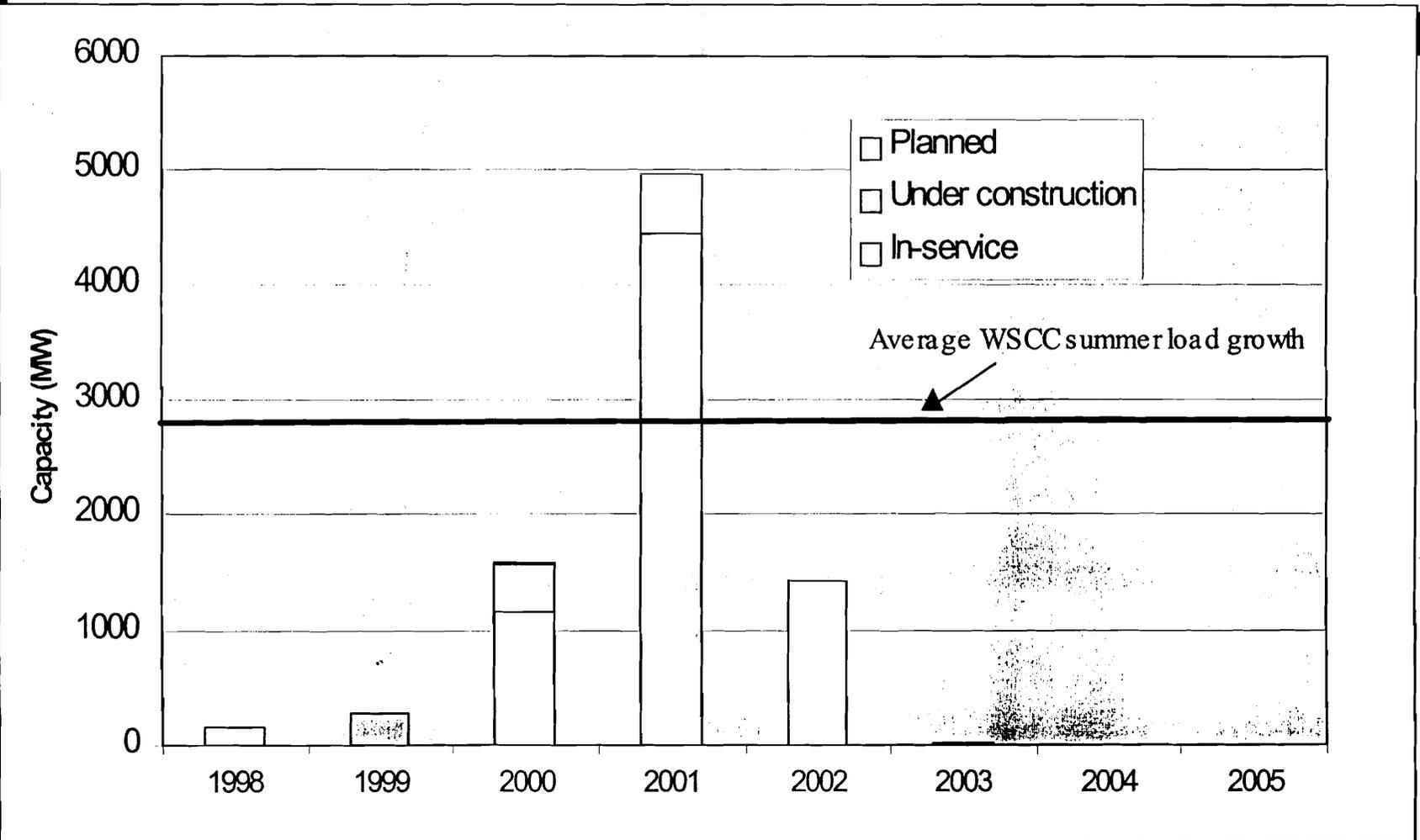
## **March, 2001**

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### **◉ Circumstances in March**

- **Second worst runoff on record**
  - **Hydro about 70% of total regional generation**
  - **Hydro system produced 4,000 Mwa less**
- **Loads have continued to grow - 220MW/yr.**
- **Little new generation has been developed**
- **Generation decreased 1,000 Mwa for fish operations during past few years**

# Demand Outpacing New Supply



# Reliability of Power System

## March 2001

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### *Council's conclusions...*

- Region faces 24% probability of being unable to meet needs at some level by winter of 2003
- Emergency warning last December (blackouts)
- *Equivalent* of 3000 MW required to bring probability down to 5% (acceptable level)
- Council called for voluntary, economic load reduction, new generation, and rain

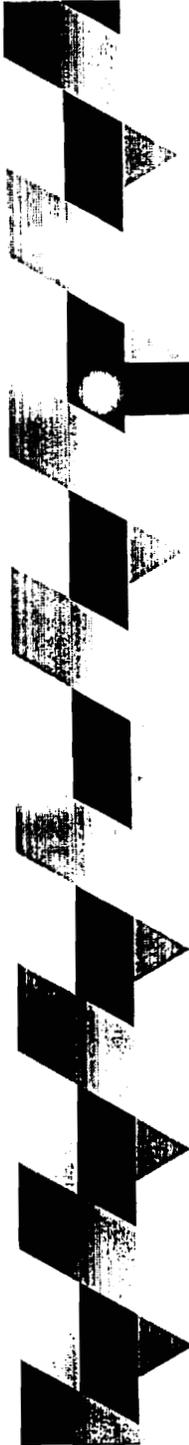


# **NWPPC Power/Reliability Outlook**

## **November, 2001**

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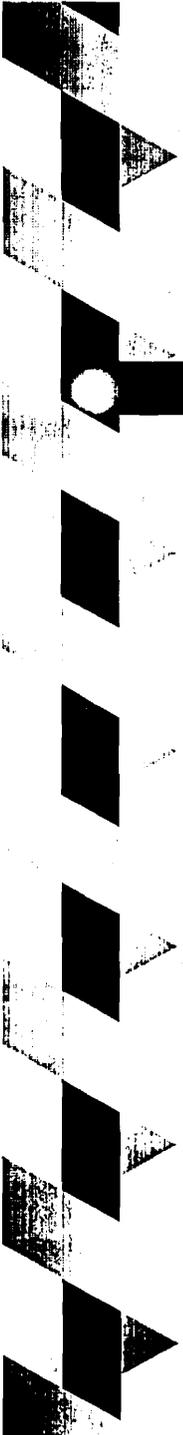
- **New Analysis shows loss of load probability for this winter greatly diminished**
- **Now under 1%, compared to 24% in the March study**
- **Goal for power system is 5% or less**



# What's Changed Since March?

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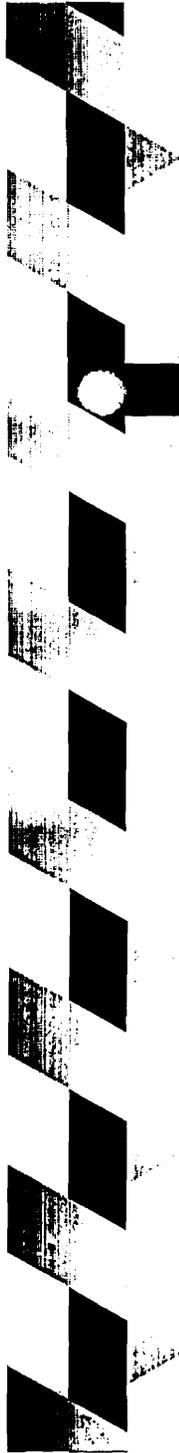
- **Loads** ↓
- **New Thermal Generation** ↑
- **Hydro Conditions** ↑



# Loads

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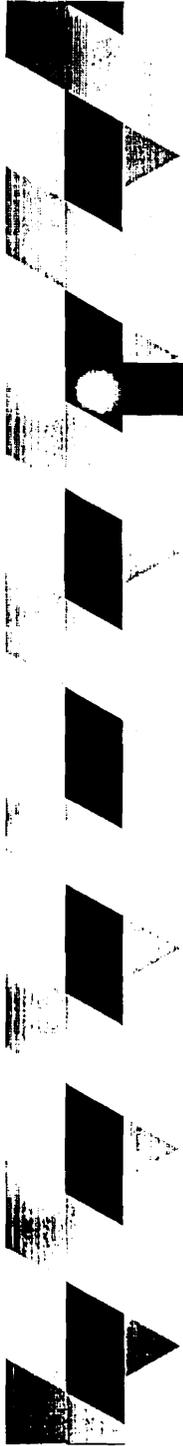
- **Loads running well under last year**
- **20% decrease compared to last year at this time**
- **Decrease amounts to 4,000 Mw of demand**
  - **70% or 2,800 Mw from large industry closing or having load bought out**
  - **Other 30% from smaller customers**
    - **demand response from higher prices**
    - **conservation programs and appeals to conserve**



# **New Thermal Generation**

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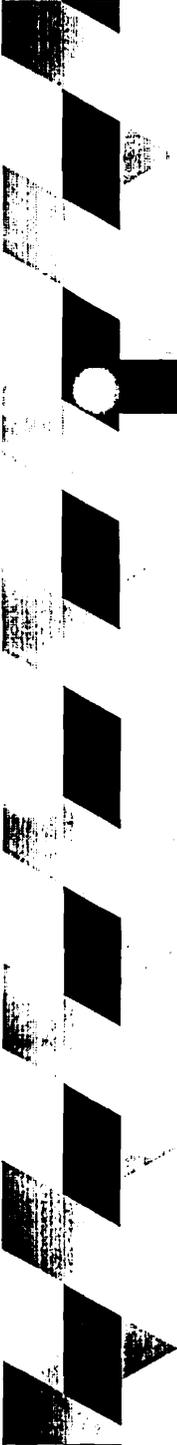
- **2,180 Mw of new capacity placed in service in Northwest during 2001**
  - **1,650 Mw of permanent generation**
  - **530 Mw of temporary generation**
- **7,000 Mw more power available in CA**
  - **3,500 Mw of new generation**
  - **3,500 Mw of existing plant will operate**
  - **California loads down -- at least 4%**
- **Assume 1,000 Mw of peak available - CA to NW**



# Hydro Conditions

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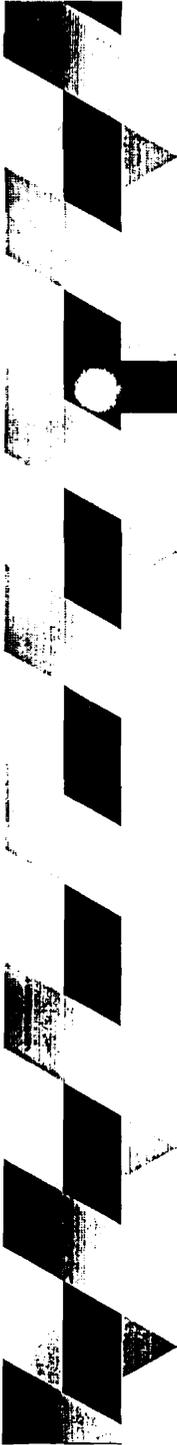
- **Modified river operations during spring/summer**
  - **Decreased spill at federal projects - resulted in 7,000 Mw months of energy available**
  - **Reservoirs refilled for this winter**
  - **Provided significantly less water for fish**
- **Currently, snow -water equivalent at 99.2% of average compared to 55% a year ago**



# Summary of Region's Power Supply

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- **Reliability of power system has increased substantially - looks good**
- **Prices have tumbled since March**
  - **Spot March prices at Mid-C, \$320 - 525/Mwh**
  - **Last week, Mid-C spot prices \$25 - 27/Mwh**
- **1,650 Mw of new generation this year**
- **1,250 Mw of new generation expected to come on line in 2002**
- **Prices sensitive to changes in D or S**



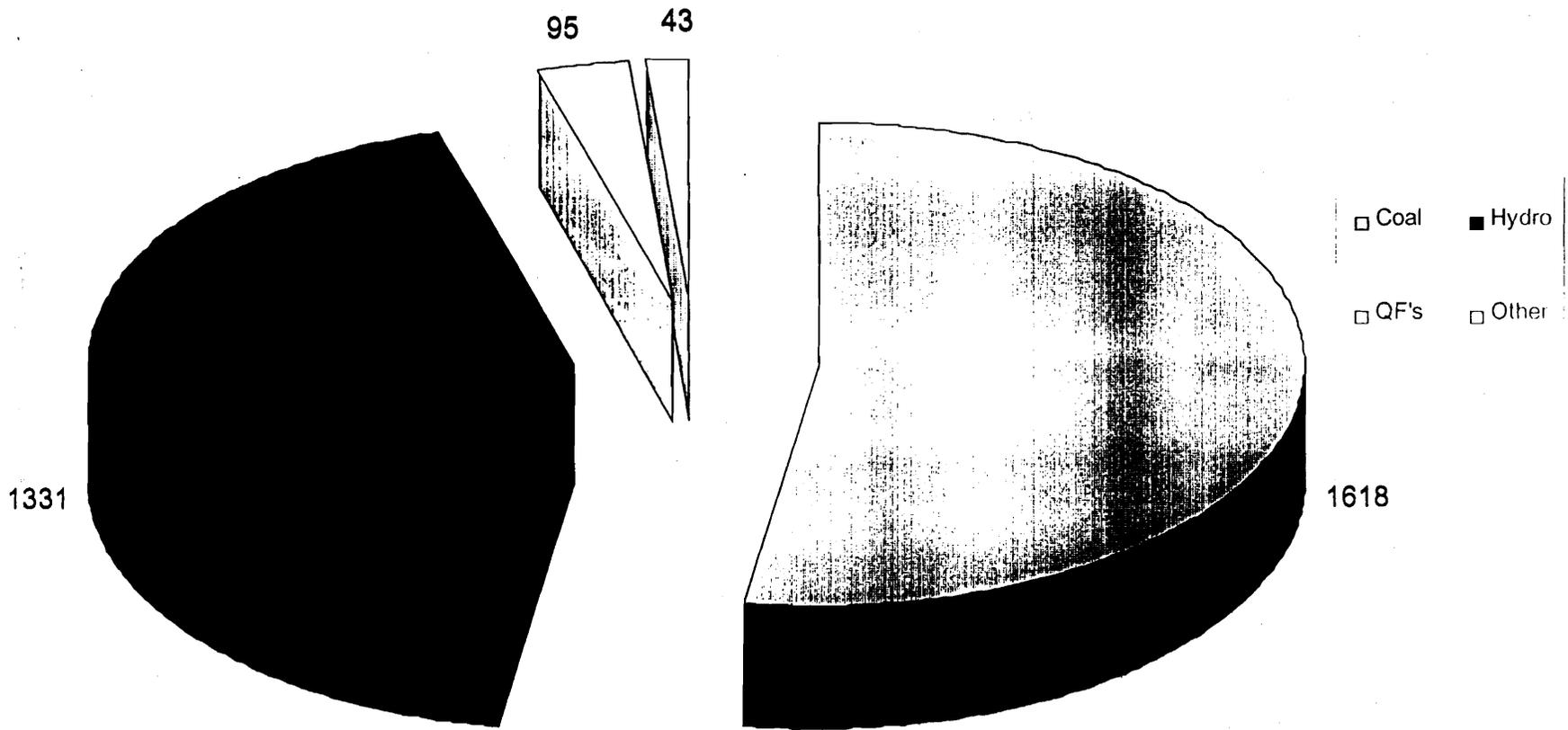
# Power Situation in Montana

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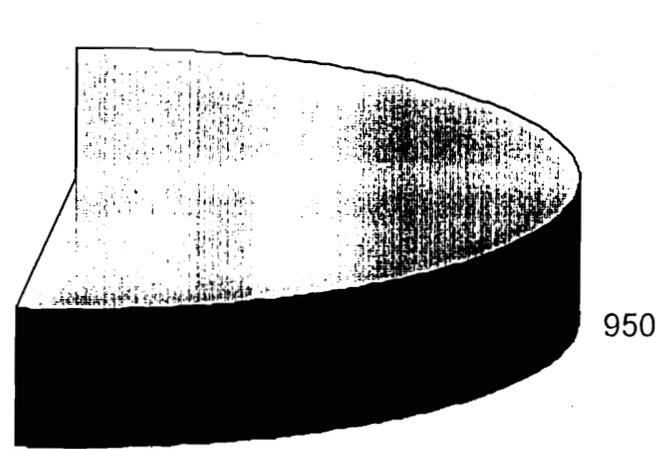
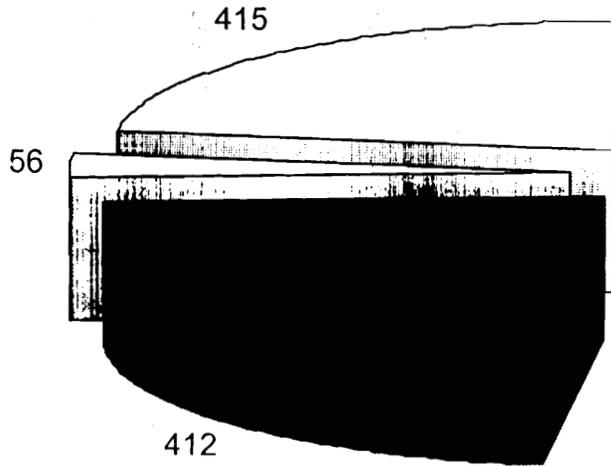
- ⦿ **There is much more power generated in MT than MT consumes**
- ⦿ **Export at least 48% of our generation**
- ⦿ **However, much of this generation is owned by out-of-state, regulated utilities and can not be allocated to MT consumers.**

# Generation By Fuel Type (Mwa)

Total Generation = 3,087 Mwa

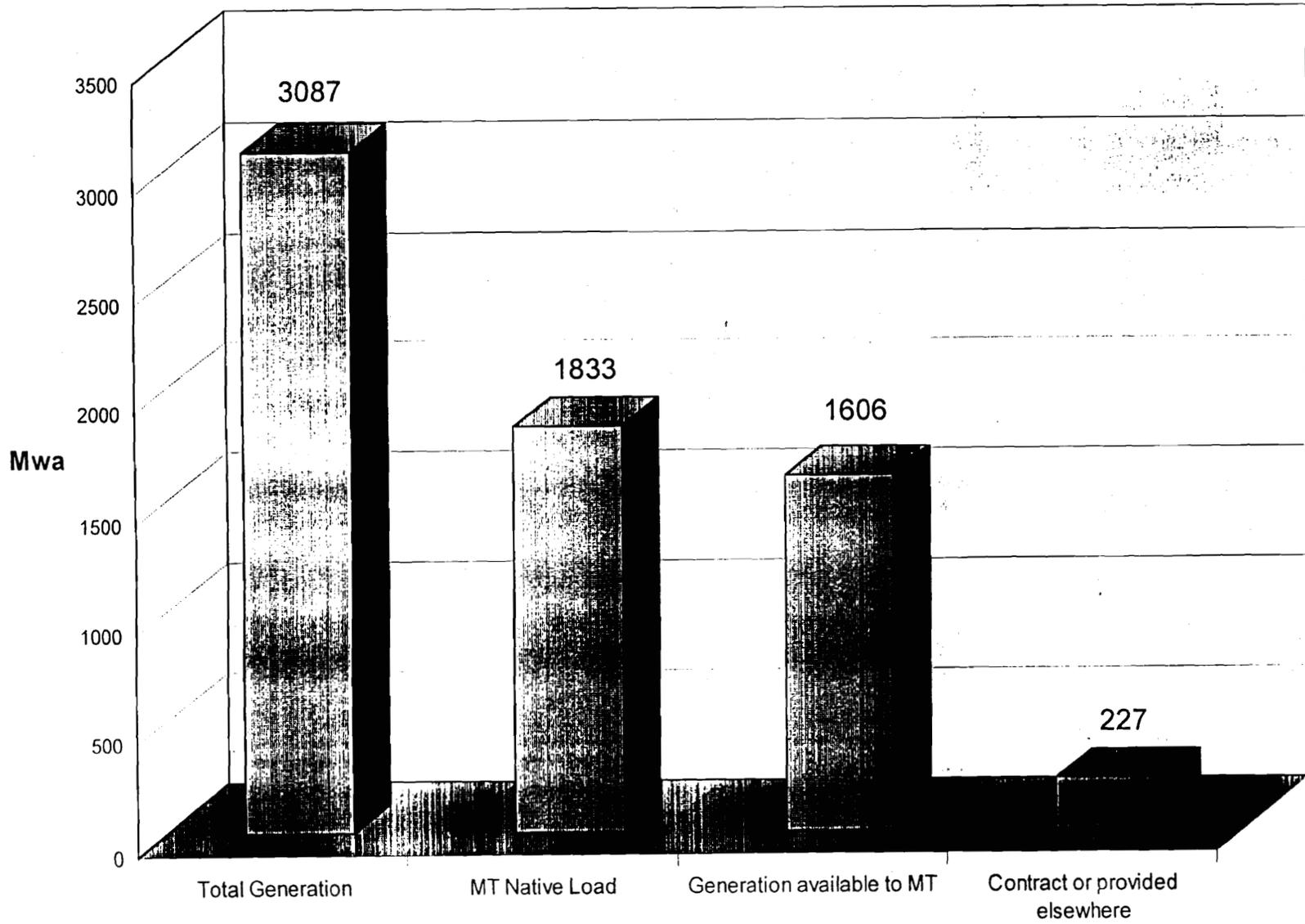


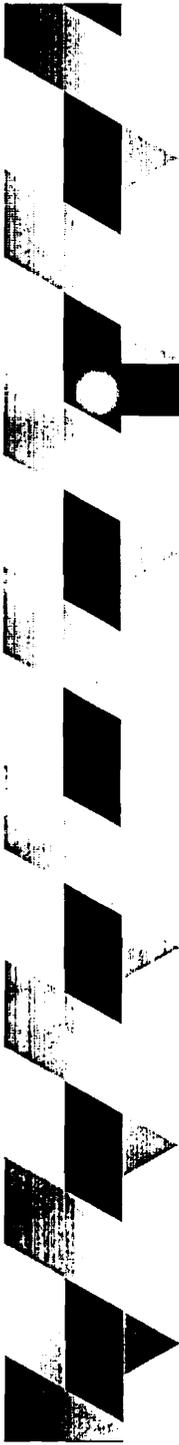
# Electricity Loads in Montana 1,833 Mwa Statewide



- MPC
- Coops
- MDU
- Large Customers

# Generation Available for MT





# List of Proposed Projects in MT

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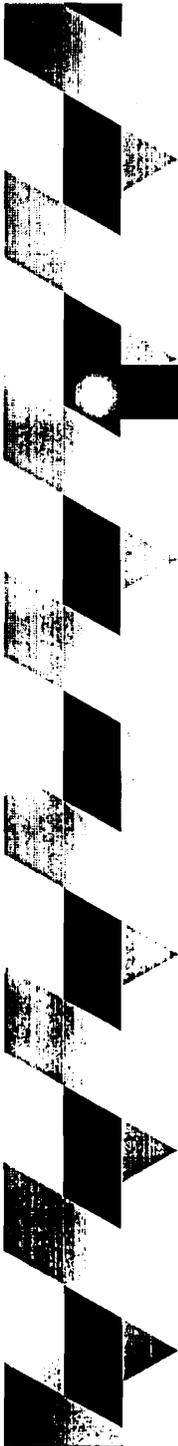
- **Bull Mountain (coal: 2 - 350 Mw)**
- **Comanche Park (coal: 2 - 100Mw)**
- **Rocky Mountain Power (coal: 100 Mw)**
- **Montana First Megawatts (gas: 245 Mw)**
- **Continental Energy/Butte (gas: 500 Mw)**
- **Montana Wind Harness (wind: 150 Mw)**
- **Blackfeet (wind: 50 Mw)**
- **Kennecott (coal: 400 Mw)**



# **SO What? Implications For MPC's Default Supply Portfolio**

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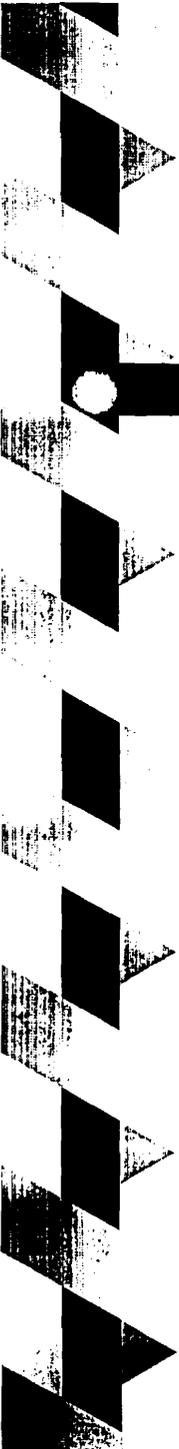
- **MPC has 3 separate issues before the PSC**
  - **Settlement of stranded costs**
  - **Approval of T & D sale**
  - **Approval of default supply portfolio & rates**
- **Timing - Approve portfolio after sale settled and approved**
  - **Work with entity that is in charge of default supply**
- **Proposed default supply portfolio**



# Portfolio Submitted By MPC to PSC

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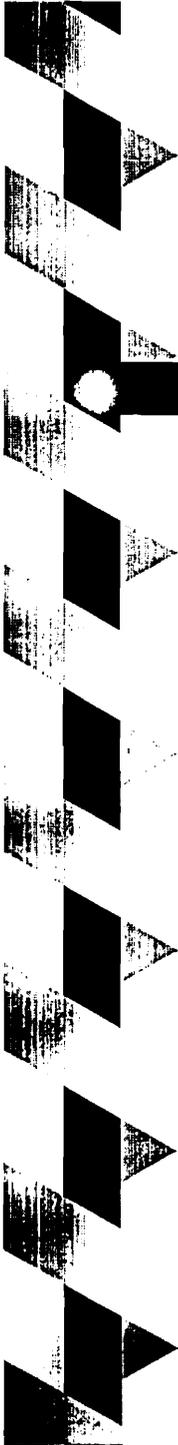
• PPL Montana	450
• Market Purchases	250
• Northwestern - MT First MW's	150
• Rocky Mountain Power	100
• QF's	100
• Montana Wind Harness	50
• Thompson River Co-Gen	10
• Tiber Dam	5
• Milltown	<u>2</u>
<b>TOTAL SUPPLY</b>	<b>1,129 MW - winter</b> 18



# New Generation in MPC Portfolio

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• <b>Northwestern</b>	<b>150</b>
• <b>Rocky Mountain Power</b>	<b>100</b>
• <b>Montana Wind Harness</b>	<b>50</b>
• <b>Thompson River Co-gen</b>	<b>10</b>
• <b>Tiber Dam</b>	<b><u>5</u></b>
<b>Total New MT Generation</b>	<b>315 Mw</b>



# **Policy Issues Raised by MPC's Proposed Portfolio**

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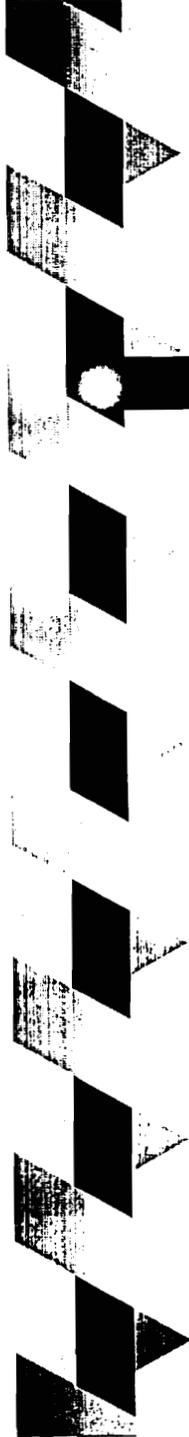
## **• Goal of Portfolio ?**

- Lowest rates to ratepayer**
- Economic Development for MT**
- Increase generation in Western U.S.**
- Create new competitors in MT**

## **• Facilitate Small Customer Choice**

- Long-term contracts inhibit customer choice**
- 37% of power extends beyond transition period**

## **• Long-term payments vs. Rate Basing**



# Summary

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- **The Northwest power system has sufficient supply to meet reliability concerns**
- **Additional generation coming online**
- **MT does not have sufficient available generation to meet its needs**
  - **Buy from market**
  - **Develop our own generation**
- **Need to determine the appropriate public policy**